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PROPERTIES OF PULPS, PAPERS, PAPERBOARDS, HARDBOARDS, AND PARTICLEBOARDS MANUFACTURED IN OR IMPORTED INTO THE PHILIPPINES

By

JAMES F. LAUNDRIE, Chemical Engineer

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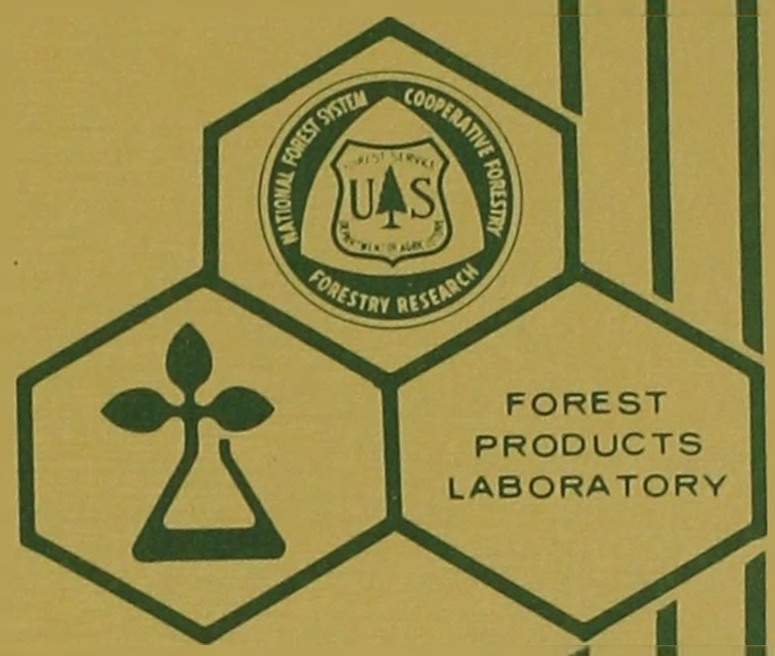

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MADISON, WISCONSIN · 53705

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

In Cooperation with the University of Wisconsin

Table 1.--Properties[1/] of pulps manufactured in or imported into the Philippines

Identification	Beating time	Freeness (Canadian Standard)	Burst factor	Tear factor	Breaking length	Apparent density	Brightness (Elrepho)
	Min	Ml			M	G/cm^3	Pct
			ABACA PULP				
Philippines - 25,920	0	595	79.3	431.7	9,655	0.54	--
	10	380	115.2	175.6	13,510	.63	--
	12	335	117.8	168.9	13,515	.64	--
	16	275	121.4	168.4	13,890	.66	--
			UNBLEACHED KRAFT PULPS				
USA - 25,905	2	700	21.3	270.5	4,425	.61	--
	15	610	49.1	163.6	7,490	.64	--
	34	415	71.8	128.6	7,835	.67	--
	46	240	77.3	120.6	10,245	.70	--
USA - 25,908	9	715	36.4	292.6	5,840	.62	--
	35	580	74.0	151.6	9,130	.67	--
	54	395	85.1	133.8	10,375	.70	--
	65	250	91.0	122.2	11,055	.71	--
USA - 25,910	10	705	32.0	189.7	5,455	.58	--
	35	470	58.1	131.6	8,370	.64	--
	42	355	59.9	120.5	8,715	.66	--
	48	265	62.9	115.6	8,965	.66	--
USA - 25,917	10	725	23.3	292.1	5,245	.55	--
	47	610	66.2	157.3	9,565	.64	--
	74	400	79.0	139.8	10,990	.67	--
	91	240	87.0	131.1	12,065	.68	--
Canada - 25,907	0	700	16.8	228.3	3,300	.56	--
	15	615	59.4	145.5	8,150	.66	--
	34	470	80.9	115.6	10,565	.70	--
	59	250	92.9	107.5	11,670	.73	--
Canada - 25,909	0	705	14.9	242.5	3,100	.58	--
	20	600	62.1	147.8	8,365	.66	--
	41	430	79.8	113.7	10,450	.71	--
	65	240	92.0	104.2	11,400	.73	--

Table 1.--Properties[1/] of pulps manufactured in or imported into the Philippines--Con.

Identification	Beating time	Freeness (Canadian Standard)	Burst factor	Tear factor	Breaking length	Apparent density	Brightness (Elrepho)
	Min	Ml			M	G/cm^3	Pct
			UNBLEACHED KRAFT PULPS--Con.				
Canada - 25,912	5	695	21.8	259.4	4,435	0.57	--
	21	600	52.2	145.2	7,855	.64	--
	39	425	68.9	128.6	9,645	.68	--
	54	260	74.5	121.2	10,330	.70	--
New Zealand - 25,906	5	720	23.3	293.6	5,055	.59	--
	36	610	67.1	137.9	10,145	.65	--
	54	425	79.4	126.7	10,955	.68	--
	68	270	88.3	118.0	11,680	.70	--
Africa - 25,918	15	715	35.4	197.3	6,115	.58	--
	37	555	61.8	147.9	8,580	.63	--
	50	390	70.3	134.4	10,005	.66	--
	60	265	71.8	121.8	10,120	.66	--
Africa - 25,919	20	705	44.1	204.2	6,660	.58	--
	45	525	62.5	163.4	9,050	.62	--
	55	375	67.8	155.7	9,300	.63	--
	64	260	71.0	150.6	9,530	.65	--
			UNBLEACHED SULFITE PULP				
USA - 25,911	9	670	1880	133.7	3,620	.59	--
	17	560	27.8	106.7	5,020	.64	--
	24	460	33.7	91.6	5,645	.66	--
	40	270	43.2	73.9	7,045	.73	--
			BLEACHED KRAFT PULPS				
New Zealand - 25,914	10	720	31.4	291.4	5,285	.61	90.3
	36	605	67.6	158.2	8,970	.65	--
	57	410	79.9	139.6	10,345	.68	--
	72	250	87.4	123.6	11,020	.70	--
Finland - 25,915	0	625	8.8	51.5	2,740	.57	88.1
	27	505	30.9	77.4	6,170	.68	--
	49	350	46.1	71.5	8,015	.72	--
	62	255	52.7	66.6	8,350	.76	--

Table 1.--Properties[1/] of pulps manufactured in or imported into the Philippines--Con.

Identification	Beating time	Freeness (Canadian Standard)	Burst factor	Tear factor	Breaking length	Apparent density	Brightness (Elrepho)
	Min	Ml			M	G/cm^3	Pct
			BLEACHED SULFITE PULP				
USA - 25,916	6	685	15.9	145.4	3,580	0.62	86.2
	17	565	30.9	98.6	5,555	.66	--
	28	420	41.4	82.8	6,770	.70	--
	40	260	48.4	73.6	7,465	.72	--
			BLEACHED GROUNDWOOD PULP				
Finland - 25,913	--	245	7.1	32.6	2,290	.44	65.1

1/Tests made according to TAPPI Standard Methods.

Table 2.--Properties of printing and writing papers manufactured in the Philippines

Identification	Weight: Square meter	Weight: Trade size[2]	Thickness	Density	Bursting strength	Tearing resistance: MD[3]	Tearing resistance: CD[3]	Folding endurance: MD	Folding endurance: CD	Tensile strength: MD	Tensile strength: CD	Porosity: Wire	Porosity: Felt	Opacity	Smoothness (Bekk): Wire	Smoothness (Bekk): Felt	Scattering coefficient	Brightness (Elrepho): Wire	Brightness (Elrepho): Felt	Castor oil penetration	Ash
	Sheet properties[1]																				
	G	Lb	Mils	G/cm³	Pts	G	G	Double folds	Double folds	Piw	Piw	Sec / 100 cm³	Sec / 100 cm³	Pct	Sec	Sec		Pct	Pct	Sec	Pct
NEWSPRINT																					
J-25,931	57.4	35.2	5.2	0.43	5.4	33.8	35.7	2	1	8.02	4.59	9.4	10.5	98.8	17.1	1.9	460.8	36.3	36.1	--	--
O-25,932	57.0	35.0	3.8	.60	11.4	35.6	34.1	7	9	2.90	2.13	36.6	37.3	96.6	17.4	11.5	430.6	40.0	44.1	--	--
B-25,933	53.4	32.8	4.6	.46	5.6	26.9	26.4	2	1	8.02	5.00	6.8	6.4	95.9	10.4	13.0	561.1	49.2	50.4	--	--
B-25,934	53.4	32.8	4.3	.49	8.2	31.3	31.8	6	2	3.00	1.63	12.1	11.1	94.5	13.1	12.4	531.4	49.3	49.2	--	--
TELEPHONE DIRECTORY																					
B-25,958	36.9	22.6	2.8	.53	8.6	15.9	23.3	19	3	10.5	4.4	25.1	28.5	80.5	21.0	31.6	491	54.4	53.1	--	--
B-25,957	38.9	23.8	3.2	.49	6.7	20.2	31.9	12	1	8.4	3.4	8.4	7.5	83.2	22.8	25.2	575	--	--	--	--
MIMEO BOND																					
A-25,935	62.8	16.7	4.0	.63	20.2	34.4	36.8	24	22	19.3	14.0	132.5	133.8	80.2	--	--	--	74.7	74.6	300+	9.1
D-25,950	72.0	19.1	4.7	.61	11.5	40.4	38.0	3	3	14.1	8.5	4.1	4.5	92.2	--	--	--	70.1	69.6	60	7.5
D-25,949	72.3	19.2	4.3	.66	15.0	28.0	27.4	2	2	19.5	11.8	11.0	16.3	91.4	--	--	--	70.4	69.4	80	4.3
H-25,953	68.6	18.3	6.3	.43	8.1	28.2	33.2	2	1	12.3	6.0	15.5	14.9	97.8	--	--	--	39.0	39.6	200	3.4
BOND																					
L-25,954	53.9	14.3	3.4	.63	11.0	38.8	38.8	12	5	12.8	6.3	18.7	21.8	94.4	--	--	--	53.6	53.3	150	7.5
L-25,955	57.2	15.2	3.4	.66	8.9	39.2	42.0	5	2	9.8	5.0	11.2	11.3	87.4	--	--	--	76.0	76.5	80	9.9
A-25,936	52.9	14.1	3.2	.64	14.6	30.6	30.4	10	16	11.6	10.1	131.6	115.2	74.2	--	--	--	--	--	300+	7.4
A-25,938	54.5	14.5	2.9	.73	16.1	25.4	27.8	26	16	16.2	12.7	157.3	154.4	73.7	--	--	--	75.5	75.2	300+	8.8
G-25,951	56.0	14.9	3.6	.61	8.5	53.4	46.8	7	3	10.7	6.0	11.7	12.7	89.0	--	--	--	75.6	76.3	100	14.7
C-25,945	56.1	14.9	2.8	.78	16.0	30.0	36.6	36	12	17.5	7.8	300+	300+	87.9	--	--	--	85.4	85.2	300+	14.2
O-25,956	58.0	15.4	3.3	.69	13.0	46.4	45.2	12	8	12.3	6.9	36.5	24.9	87.3	--	--	--	74.9	73.2	155	10.6
A-25,937	74.3	19.8	3.8	.77	27.7	36.6	43.8	36	16	24.8	15.5	300+	300+	82.0	--	--	--	69.6	69.4	300+	3.6
C-25,942	72.0	19.2	3.9	.73	18.2	41.6	49.6	40	11	18.4	9.0	300+	300+	92.0	--	--	--	84.2	83.7	300+	15.5
C-25,944	71.3	19.0	3.7	.76	20.8	48.4	59.0	88	15	24.6	9.0	300+	300+	90.7	--	--	--	82.9	82.4	300+	15.6
D-25,946	72.0	19.2	4.0	.70	12.0	25.4	28.8	2	2	15.1	8.1	12.1	8.9	92.6	--	--	--	71.9	72.7	75	6.7
D-25,947	72.9	19.4	4.0	.72	14.7	30.2	29.6	1	1	16.1	12.0	14.9	16.2	89.5	--	--	--	74.0	74.0	100	5.6
G-25,952	69.5	18.5	4.1	.67	14.9	58.2	62.4	15	8	17.3	9.4	28.4	31.4	93.6	--	--	--	73.7	73.7	145	11.7
C-25,943	63.3	16.8	3.3	.76	17.8	43.8	45.2	25	18	17.3	9.8	85.1	85.8	89.9	--	--	--	83.5	82.9	300+	15.2
D-25,948	60.3	16.0	3.6	.67	10.2	22.2	23.2	1	1	12.9	7.7	8.5	5.8	86.9	--	--	--	71.7	72.3	42	3.8
AIRMAIL BOND																					
C-25,939	34.3	9.1	2.0	.68	8.5	15.2	19.3	20	5	10.5	4.7	111.5	101.0	74.0	--	--	--	81.5	81.6	300+	15.9
C-25,940	30.2	8.0	1.8	.65	9.0	14.2	14.6	16	7	9.2	4.6	63.3	70.8	69.7	--	--	--	81.1	81.0	300+	15.8
C-25,941	36.0	9.6	1.9	.73	11.4	19.7	22.0	28	10	10.2	5.4	108.1	124.7	73.1	--	--	--	83.6	83.3	300+	12.9

1/Tests made according to TAPPI Standard Methods except as noted.
2/Trade size for the bond papers is 500 sheets, 17 by 22 inches, and for the other papers it is 500 sheets, 24 by 36 inches.
3/MD = Machine direction and CD = Cross direction.

Table 3.--Properties of towel, tissue, napkin, and cigarette papers manufactured in the Philippines

Identification	Sheet properties[1/]																
	Weight		Thickness	Density	Bursting strength	Tensile				Brightness (Elrepho)		Water absorbency (0.1 cm^3)	Softness (Clark)			Stretch	
						Dry		Wet									
	Square meter	24 by 36 - 500				MD[2/]	CD[2/]	MD	CD	Wire	Felt		Wire	Felt	Overall	MD	CD
	G	Lb	Mils	G/cm^3	Pts	Piw	Piw	Piw	Piw	Pct	Pct	Sec				Pct	Pct
TOWEL																	
Q-25,996	45.9	28.2	6.3	0.29	15.1	1.18	1.01	0.16	0.15	42.1	42.6	300+	33.4	11.8	19.8	9.8	1.9
G-25,990	50.2	30.8	5.1	.39	15.9	2.08	.87	.36	.21	69.0	69.4	130	50.3	16.8	29.1	12.7	2.1
G-25,987	16.1	9.9	2.9	.22	5.3	.19	.04	.02	--	81.6	81.4	300+	344.9	420.3	380.7	12.1	5.2
TISSUE																	
K-25,993	15.1	9.3	2.4	.24	14.0	.37	.06	.01	--	--	--	90	403.8	464.2	432.9	17.0	8.2
K-25,991	15.8	9.7	2.7	.23	9.2	.27	.07	.01	--	84.2	84.1	50	469.1	469.1	469.1	36.5	9.0
G-25,988	15.4	9.5	2.8	.22	9.1	.38	.05	.08	--	--	--	300+	465.6	465.6	465.6	20.7	8.9
Q-25,995	29.3	18.0	3.3	.35	12.7	.59	.39	.03	--	72.6	72.4	140	278.5	59.3	128.5	15.1	1.5
G-25,986	16.3	10.0	2.6	.25	6.8	.26	.08	.01	--	--	--	300+	460.6	460.6	460.6	9.9	4.3
NAPKIN																	
K-25,992	22.4	13.8	3.9	.23	13.7	.63	.13	.05	--	84.9	84.8	40	272.3	162.6	210.4	27.3	5.0
G-25,989	23.9	14.7	3.5	.27	9.5	.47	.16	.05	--	80.0	79.8	160	212.7	168.9	189.5	20.5	2.9
CIGARETTE																	
K-25,994	21.9	13.4	1.4	.63	51.9	2.20	1.12	.13	.06	95.1	95.3	--	---	---	---	--	---

1/Tests were made according to TAPPI Standard Methods except as noted.
2/MD = Machine direction; CD = Cross direction

Table 4.--Properties of corrugating medium and linerboard manufactured in the Philippines

Identification	Sheet properties[1]: Weight, Square meter	Weight, 1,000 sq. ft.	Thickness	Density	Bursting strength	Tearing resistance MD[3]	Tearing resistance CD[3]	Folding endurance MD	Folding endurance CD	Porosity (1/4-in. orifice)	Ring crush MD	Ring crush CD	Concora	Tensile strength[2]: Maximum strength MD	Maximum strength CD	Modulus of elasticity MD	Modulus of elasticity CD	Strain-to-failure MD	Strain-to-failure CD	Pycnometer thickness	Concora liner test MD	Concora liner test CD
	G	Lb	Mils	G/cm^3	Pts	G	G	Double folds	Double folds	Sec/ 100 cm^3	Lb	Lb	Lb	Lb/in.^{2}	Lb/in.^{2}	Lb/1,000 in.^{2}	Lb/1,000 in.^{2}	Pct	Pct	Mils		
CORRUGATING MEDIUM																						
Q-25,926	125.0	25.6	7.4	0.66	30.2	97.2	109.2	41	22	300+	45.2	36.5	41.0	4,440	2,980	689	402	1.49	2.92	6.5	---	--
N-25,927	126.8	26.0	10.3	.49	33.1	115.2	115.6	112	41	200	49.2	35.0	56.6	4,520	2,190	684	242	1.62	4.09	7.9	---	--
J-25,928	127.0	26.0	7.9	.64	20.6	117.6	126.4	35	9	135	32.3	27.1	24.6	3,620	2,040	660	309	1.08	1.69	6.5	---	--
B-25,929	128.3	26.3	8.9	.57	37.5	113.2	118.8	159	86	180	60.3	43.5	60.5	5,560	2,770	851	354	1.48	2.37	7.3	---	--
B-25,930	159.1	32.6	11.5	.54	49.2	114.4	136.4	146	50	300+	86.4	63.9	81.4	5,660	2,740	1,014	336	1.64	3.36	9.5	---	--
LINERBOARD																						
F-25,923	186.3	38.2	10.5	.70	72.0	162.4	185.6	249	56	--	86.8	69.7	--	5,770	2,590	941	343	1.54	2.41	10.3	66.6	37.1
B-25,924	189.8	38.9	11.5	.65	69.2	229.6	262.4	371	187	--	97.4	73.1	--	7,510	3,380	1,379	365	1.26	4.55	10.0	73.2	35.6
F-25,922	202.1	41.4	10.5	.76	94.0	212.8	255.8	1,339	266	--	110.3	79.5	--	8,980	3,540	1,544	331	1.75	4.63	9.9	83.3	36.8
B-25,925	342.3	70.2	19.5	.69	139.5	436.8	520.0	2,939	1,826	--	146.8	115.2	--	7,520	3,000	1,091	362	1.67	3.62	18.1	144.8	86.1

1/Tests were made according to TAPPI Standard Methods except as noted. The water absorbency (0.1 cm^3) on all sheets was in excess of 300 seconds.
2/Tests made with a universal tester equipped with an electrical load cell.
3/MD = Machine direction and CD = Cross direction.

Table 5.--Properties of miscellaneous types of papers manufactured in or imported into the Philippines

Identification[1]	Sheet properties[2]: Weight		Thickness	Density	Bursting strength	Tearing resistance		Folding endurance		Tensile strength		Porosity		Opacity	Smoothness (Bekk)		Brightness (Elrepho)		Castor oil penetration	Wax pick (Dennison)	Ash
						MD[4]	CD[4]	MD	CD	MD	CD	Wire	Felt		Wire	Felt	Wire	Felt			
	Square meter	Trade size[3]																			
	G	Lb	Mils	G/cm³	Pts	G	G	Double folds	Double folds	Piw	Piw	Sec 100 cm³	Sec 100 cm³	Pct	Sec	Sec	Pct	Pct	Sec		Pct
BOOK PAPER																					
H-25,997	59.2	40.0	4.0	0.58	12.5	23.6	23.2	4	5	7.4	14.9	47.8	51.3	78.9	3.2	4.0	67.5	66.7	300+	12	7.9
Korea - 25,963	69.8	47.1	3.6	.77	14.5	30.6	31.4	8	6	16.0	9.7	13.6	13.5	85.8	27.4	24.5	77.5	80.2	55	10A	21.5
G-25,961	70.8	47.8	3.7	.76	18.8	54.4	63.4	69	17	24.8	10.6	195.4	191.7	92.0	29.0	25.6	78.6	78.8	300+	10A	14.8
D-25,960	70.6	47.7	3.9	.71	11.5	36.6	34.4	2	3	15.4	12.9	20.8	17.3	87.4	54.6	29.2	73.9	74.8	85	16A	7.0
USA - 25,962	81.0	54.7	3.2	1.01	21.5	49.8	45.2	37	25	22.0	11.5	300+	300+	94.5	300+	300+	78.8	78.6	300+	9A	22.4
USA - 25,964	183.8	124.0	8.1	.89	78.0	134.4	178.0	77	25	83.5	29.4	256.4	288.8	95.5	34.4	35.8	90.2	90.3	300+	18A	6.6
OFFSET PAPER																					
England - 25,965	80.4	54.2	4.3	.74	24.4	75.6	88.8	317	52	32.2	12.1	177.5	139.6	92.0	11.3	22.4	83.1	82.3	300+	18A	5.3
ONION SKIN																					
C-25,969	28.5	7.6	1.7	.64	7.7	16.3	16.3	40	42	8.0	5.1	45.6	33.3	56.2	---	---	79.8	79.7	300+	---	9.6
G-25,970	30.7	8.2	2.3	.52	5.9	19.3	25.2	16	4	8.1	4.1	9.8	9.6	66.8	---	---	71.1	71.2	65	---	3.0
L-25,971	30.8	8.2	2.3	.53	4.2	19.9	28.8	8	1	7.0	3.4	4.4	3.8	69.5	---	---	75.9	75.3	45	---	8.0
Q-25,972	30.6	8.1	2.1	.58	3.7	12.8	17.2	4	0	5.7	3.5	20.7	19.5	72.0	---	---	60.6	60.0	135	---	5.2
BIBLE PAPER																					
C-25,959	46.5	31.4	2.4	.77	13.2	25.2	25.4	19	14	13.8	7.6	78.5	86.0	75.5	40.0	18.4	82.0	81.6	131	---	14.8

1/Those with a single letter preceding numbers were manufactured in the Philippines.
2/Tests made according to TAPPI Standard Methods except as noted.
3/Trade size for onion skin is 500 sheets, 17 by 22 inches, and for the other papers it is 500 sheets, 25 by 38 inches.
4/MD = Machine direction; CD = Cross direction

Table 6.--Properties of miscellaneous types of paper manufactured in or imported into the Philippines

Identification[2]	Sheet properties[1]: Weight, Square meter	Weight, 24 by 36 - 500	Thickness	Density	Bursting strength	Tearing resistance MD[3]	Tearing resistance CD[3]	Folding endurance MD	Folding endurance CD	Tensile strength MD	Tensile strength CD	Porosity Wire	Porosity Felt	Opacity	Turpentine penetration Wire	Turpentine penetration Felt	Cobb size Wire	Cobb size Felt
	G	Lb	Mils	G/cm^3	Pts	G	G	Double folds	Double folds	P.i.w.	P.i.w.	Sec/100 cm^3	Sec/100 cm^3	Pct	Sec	Sec	G/m^2	G/m^2
KRAFT PAPER																		
Q-25,982	34.8	21.4	2.8	0.48	6.7	27.4	34.2	---	---	8.6	3.8	5.2	6.2	85.0	--	--	9.8	10.2
P-25,981	59.2	36.3	4.7	.50	15.9	54.6	74.4	---	---	20.2	9.4	14.0	14.1	97.8	--	--	15.3	15.5
O-25,980	69.6	42.7	4.3	.64	31.0	96.8	100.0	---	---	29.4	13.3	46.1	45.0	92.5	--	--	24.6	24.7
SACK GRADE																		
N-25,979	66.6	40.9	5.1	.51	30.4	105.6	102.8	---	---	24.7	14.7	22.4	20.1	93.6	--	--	20.4	21.2
MANILA PAPER																		
A-25,977	60.8	37.4	3.6	.66	16.0	45.0	52.6	---	---	15.6	9.9	133.2	128.1	92.8	--	--	25.0	23.4
C-25,976	60.4	37.1	3.2	.73	16.3	35.6	39.8	---	---	16.5	7.9	157.4	156.3	90.5	--	--	19.6	24.5
E-25,978	106.9	65.7	7.0	.60	46.2	141.6	197.6	---	---	26.3	16.3	28.6	32.2	100.0	--	--	29.3	24.1
GREASEPROOF AND GLASSINE																		
USA-25,975	33.8	20.8	1.6	.82	14.0	10.5	11.0	109	106	15.0	7.6	1,084	1,062	---	30	90	--	--
C-25,973	41.6	25.5	2.1	.77	13.2	18.7	22.2	109	24	12.4	6.9	1,765	1,213	---	15	15	--	--
USA-25,974	39.3	24.1	1.4	1.14	19.6	14.9	17.5	708	514	20.8	10.0	4,767	5,688	---	60	60	--	--

1/Tests made according to TAPPI Standard Methods except as noted.
2/Those with a single letter preceding numbers were manufactured in the Philippines.
3/MD = Machine direction and CD = Cross direction.

Table 7.--Properties of boards manufactured in or imported into the Philippines

Identification[3]	Sheet properties[1]																	
	Weight		Thickness	Density	Bursting strength	Tearing resistance		Stiffness (Taber)		Brightness (Elrepho)		Tensile strength[2]						Pycnometer thickness
												Maximum strength		Modulus of elasticity		Strain-to-failure		
	Square meter	3,000 sq. ft.				MD[4]	CD[4]	MD	CD	Wire	Felt	MD	CD	MD	CD	MD	CD	
	G	Lb	Mils	G/cm^3	Pts	G	G			Pct	Pct	Lb/in.^{2}	Lb/in.^{2}	1,000 lb/in.^{2}	1,000 lb/in.^{2}	Pct	Pct	Mils
BOXBOARD																		
J-26,003	341.8	209.9	16.9	0.80	95.7	247.2	364.8	159.0	63.0	--	--	5,890	2,250	1,157	270	2.09	3.92	15.8
M-26,004	342.8	210.5	17.9	.75	76.8	276.8	496.8	216.0	60.0	--	--	5,290	1,540	881	194	1.46	4.01	16.6
O-26,005	456.7	280.4	22.9	.79	121.6	344.0	392.0	360.0	164.0	--	--	5,230	2,480	873	277	1.98	4.87	22.0
INDEX BOARD																		
D-26,001	137.9	84.7	9.1	.60	18.0	71.2	76.4	17.4	8.4	68.5	68.0	3,000	1,620	556	252	1.02	2.17	7.9
D-25,998	140.4	86.2	8.3	.67	19.6	68.8	74.8	17.0	8.6	--	--	3,620	2,170	684	342	.91	1.84	7.4
FILE FOLDER																		
D-25,999	190.1	116.8	9.9	.76	38.2	95.2	101.2	29.8	18.6	40.4	40.6	4,490	2,760	714	362	1.39	2.42	9.1
D-26,000	214.5	131.7	13.4	.63	32.0	152.0	168.4	54.2	26.4	40.3	39.6	3,050	1,700	644	261	1.11	2.10	12.2
WHITE BRISTOL																		
USA-26,007	137.3	84.3	7.0	.78	37.2	82.8	90.4	10.6	6.6	--	--	5,020	3,290	634	390	2.22	4.22	6.4
FOLDCOTE																		
USA-26,006	222.5	136.6	12.1	.72	64.0	217.6	222.4	69.6	35.6	--	--	5,420	2,700	1,070	396	1.59	3.63	11.3
CLAY COATED BOARD																		
Japan-26,008	237.9	146.1	12.5	.75	56.6	104.8	214.4	92.0	34.0	--	--	6,080	1,640	1,174	240	1.51	3.62	11.7
CHIPBOARD																		
J-26,002	480.9	295.3	29.7	.64	62.2	290.4	382.4	409.0	200.0	--	--	2,060	1,320	676	256	.73	2.03	26.6

1/Tests made according to TAPPI Standard Methods except as noted.
2/Tests made with a universal tester equipped with an electrical load cell.
3/Those with a single letter preceding number were manufactured in the Philippines.
4/MD = Machine direction and CD = Cross direction.

Table 8.--Properties of hardboards and particleboards manufactured in the Philippines

Type of panel product	Thick-ness	Density	Static bending[1/]			Internal bond maximum stress[1/]	Tensile strength[1/]		Dimensional movement[2/]			
			Maximum load	Modulus of rupture	Modulus of elasticity		Maximum load	Maximum stress	From 50 to 90 pct relative humidity		From 50 pct relative humidity to water soak	
									Length	Thickness	Length	Thickness
	In.	Lb/ft^3	Lb	Lb/in.^{2}	1,000 lb/in.^{2}	Lb/in.^{2}	Lb	Lb/in.^{2}	Pct	Pct	Pct	Pct
Hardboard - standard regular - smooth	3/16	63.9	83	6,990	635	285	1,490	4,980	0.14	7.01	0.33	22.04
Hardboard - standard tempered - smooth	3/16	64.8	95	8,550	678	445	2,050	7,070	.11	5.49	.21	16.93
Hardboard - stucco - embossed	3/16	[3/] 64.0	37	---	---	---	760	---	.18	4.35	.48	19.65
Hardboard - diamond - embossed	3/16	[3/] 64.0	52	---	---	---	1,000	---	.13	5.17	.38	16.45
Particleboard	3/8	50.0	87	2,560	411	26	440	750	.21	4.03	--	---
Particleboard	1/2	51.5	131	3,100	493	85	980	1,300	.21	3.11	--	---

1/Strength properties determined according to ASTM Standard D 1037-72a.

2/Dimensional movement determined on 1/2 by 6-in. specimens preconditioned 30 days at 50 pct relative humidity followed by 30-day exposure to 90 pct relative humidity and 80° F.

3/Nominal density.